

REMARKS

Claims 1-41 are pending in the Application.

Claims 1-10 and 21-31 stand rejected.

Claims 11-20 and 32-41 are allowed. Applicants acknowledge the allowance of these claims and hereby express appreciation to the Examiner for allowing these claims.

Rejections Under 35 U.S.C. § 112, ¶ 2

Claims 1-10 and 21-30 stand rejected under 35 U.S.C. 112 ¶ 2 because "it is unclear how the state machine operates in second mode when the 'assert second signal' is substituted with the 'assert first signal.'" *See* Office Action, mailed 11/30/2004 ¶ 2. Claim 1 is currently amended to more clearly point out the subject matter of the present invention. Specifically, the element "wherein the network state is the second mode if the asserted second signal is substituted for an asserted first signal" is added. As amended, claim 1 is not indefinite because it particularly points out and distinctly claims the subject matter of the invention.

Further, the elements of claim 1 find support in the Specification. Claim 1 recites "a first signal," which in an embodiment could be a "configV1M2" signal. *See* Specification, p. 2, line 27; p. 3, line 1; p. 6, line 26; p. 7, line 1, 6. According to the Specification, configV1M2 could be a signal which forces a station into the V1M2 mode (when there are three possible network states). *See* Specification, p. 3, line 8. In an embodiment, the V1M2 mode could be a claimed "first mode."

Further, claim 1 recites a "second signal," which in an embodiment could be a "configV1" signal. *See* Specification, p. 3, line 7. ConfigV1 could be a signal which forces a station into the 1M8 mode. (when there are three possible network states). In an embodiment, 1M8 mode could be a claimed "second mode."

Still further, claim 1 recites a "third signal," which in an embodiment could be a "configV2" signal. *See* Specification, p. 2, line 26, p. 7, line 1, 6. ConfigV2 could be a signal which forces a station into the 10M8 mode (when there are three possible network states). In an embodiment, the 10M8 mode, could be a claimed "third mode."

Claim 1 recites "wherein an asserted second signal is substituted for an asserted first signal." In the above example embodiment, an asserted configV1 (second signal) could be substituted for an asserted configV1M2 (first signal). *See* Specification, p. 6, line 20 (ConfigV1M2 = ConfigV1).

Claim 1 recites "wherein a network state is the second mode if the asserted second signal is substituted for an asserted first signal." In the above example embodiment, the network state could be 1M8 mode (second mode) if the asserted configV1 (second signal) is substituted for an asserted configV1M2 (first signal). According to the Specification, in an embodiment the 1M8 mode occurs if the configV1M2 signal is asserted or the configV1 signal is asserted. *See* Specification, p. 7, line 1-2. In the embodiment, the following equation applies "ConfigV1M2 = ConfigV1." Specification, p. 6, line 20.

Claim 1 recites, "wherein the network state is the second mode if the second signal is asserted." In the example embodiment, the network state could be 1M8 mode (the second mode) if the second signal (ConfigV1) is asserted. *See* Specification, p. 3, line 8-10 (stating, "ConfigV1 is a signal which forces a station into the 1M8 mode.")

Claim 1 recites, " wherein the network state is the third mode if the network state is not in the second mode." In the above example embodiment, the network state is 10M8 (the third mode) when the network state is not in the 1M8 mode (the second mode). Support is found in the Specification with the equation "10M8_MODE := not 1M8_MODE." *See* Specification, p. 7, line 4. In the embodiment, equations for the three network modes V1M2, 1M8, and 10M8 can be collapsed into equations for two modes, specifically, 1M8 and 10M8. *See* Specification, p. 6, lines 12-13.

As shown in the embodiment discussed above and found in the Specification, amended claim 1 particularly points out the subject matter of the claimed invention. Further, the claim elements find support in the Specification. Therefore, amended claim 1 is allowable over any rejection based on 35 U.S.C. § 112 ¶ 2.

Claim 2 and 6-10 stand rejected but would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, ¶ 2. *See* Office Action mailed 11/30/2004, ¶ 4, page 3. Claims 2 and 6-10 depend from amended claim 1 (directly or indirectly) and therefore recite each and every limitation of claim 1. Amended claim 1 is allowable and, therefore, claims 2 and 6-10 are allowable.

Claim 21 stands rejected as indefinite for failing to particularly point out and distinctly claim the subject matter of the present invention. *See* Office Action, mailed 11/30/2004, ¶ 1, page 2. The Examiner cites to line 7, step (b) for claim 21, which recites "substituting an asserted second signal for an asserted first signal." *Id.* Claim 21 is currently amended to include the step: "(e) setting the network state to the second mode if the asserted second signal is substituted for the asserted first signal." As amended, claim 21 meets the requirements for patentability under 35 U.S.C. § 112, ¶ 2. Claim 21 recites elements similar to claim 1 elements. Further, claim 21 has been amended in a similar way as claim 1 has been amended. Therefore, the arguments and explanations provided herein for claim 1 also apply to claim 21. For at least those reasons, amended claim 21 is patentable over the Examiner's 35 U.S.C. § 112, ¶ 2 rejections.

Claims 22 and 26-31 stand rejected but would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, ¶ 2. *See* Office Action mailed 11/30/2004, ¶ 4, page 3. Claims 22 and 26-31 depend from amended claim 21 (directly or indirectly) and therefore recite each and every limitation of claim 21. Amended claim 21 is allowable and, therefore, claims 21 and 26-31 are allowable. Also, claim 31 is allowable because the Examiner has not provided a basis for rejecting claim 31.

Rejections Under 35 U.S.C. § 103

Claims 1, 3-5, 21, and 23-25 ("rejected claims") stand rejected as obvious over HPNA specification version 2.0 (the "HPNA specification") and U.S. Patent No. 6,574,237 (hereinafter "*Bullman*").

The Examiner has not presented a *prima facie* case that any claim is obvious over the HPNA Specification in view of *Bullman*. The Examiner has not provided

citations to the HPNA 2.0 specification that disclose elements of the rejected claims. Instead of citing to the HPNA 2.0 specification, the Examiner appears to rely solely on Applicants' Specification as reciting the HPNA Specification. ("Applicant's specification pages 1-3 discloses the HPNA 2.0 specification discloses....") Further, the Examiner mis-characterizes the Applicants' specification as admitting certain prior art. *See* Office Action mailed 11/30/2004, ¶ 3 ("unpatentable over admitted prior art.")

The rejections based on the HPNA 2.0 specification are traversed. The Examiner appears to cite from Applicants' Specification as disclosing certain elements of the HPNA 2.0 specification. *See id.* For example, the Examiner states that Applicants' specification discloses that the HPNA 2.0 discloses "control chip 100 (a network state machine) that receives ConfigV1M1 signal (a first signal) to operate in V1M2 mode..." Applicants object to such characterizations of the Applicants' specification and further object to the Examiner's characterizations regarding alleged "admitted prior art."

In addition to the rejected claims being allowable because the Examiner has not presented a *prima facie* case of obviousness, the rejected claims are allowable because neither *Bullman* nor the HPNA specification recite every limitation of amended claims 1 and 21. In addition, there is no motivation to combine *Bullman* and the HPNA specification.

The basic test for nonobvious subject matter is whether the differences between the subject matter and the prior art are such that the claimed subject matter as a whole would not have been obvious to a person having ordinary skill in the art to which the subject matter pertains. The United States Supreme Court in *Graham v. John Deere & Co.*, 383 U.S. 1 (1966) set forth the factual inquiries which must be considered in applying the statutory test: (1) a determination of the scope and contents of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; and (3) resolving the level of ordinary skill in the pertinent art.

Determining Scope and Content of Prior Art

In determining the scope and content of the prior art, the Examiner must first consider the nature of the problem on which the inventor was working. Once this has been established, the Examiner must select, for purposes of comparing and contrasting with the claims at issue, prior art references which are reasonably pertinent to that problem (the inventor's field of endeavor). *See Heidelberger Druckmaschinen AG v. Hantscho Commercial Products, Inc.*, 30 U.S.P.Q.2d 1377, 1379 (Fed. Cir. 1994). In selecting references, hindsight must be avoided at all costs.

The present invention relates to methods and apparatuses relating to telephone line networks that support three network states using two network states. *See Patent Application*, claim 21, page 13. There are three possible network states for 10M8 stations: V1M2 mode, 1M8 mode, and 10M8 mode. *See Patent Application*, page 2, lines 3-4. In an embodiment, when a station is in the V1M2 mode, instead of transmitting frames in the 10M8 format with the gap frame, frames are transmitted in the 1M8 format frame without any gaps. *See Patent Application*, page 7, lines 15-17. In an embodiment, the complexity of a network's state machine is reduced because the three network state equations of HPNA 2.0 collapse into two equations. *See Patent Application*, page 7, lines 17-20.

Bullman relates to HPNA (Home Phone-Line Networking Alliance) systems with V2.x and V1.x components that operate over the same telephone line network. *See Bullman*, ABSTRACT. According to *Bullman*, it is valuable to be able to distinguish advanced capabilities of network appliances on a telephone network. Col. 4, lines 31-34. Upon detection of a V1.x node on the telephone line network, an advanced network appliance tags the system as a mixed mode topology and modifies the preamble of the native mode frame by prepending a valid V1.x access ID to the native mode frame. Col. 2, lines 30-35. *Bullman* claims a network appliance with a sensor to recognize the presence of a low-speed device. Col. 5, line 56. The network appliance includes a legacy preamble injector to insert a legacy preamble for transmission at low-speed rates. Col. 5, lines 61-63.

Differences Between Prior Art and Claims

The second step within the test described in *Graham* is to ascertain the differences between the cited prior art and the claims at issue. A *prima facie* showing of obviousness requires the Examiner to establish that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention. The showings must be clear and particular. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999).

Before discussing any differences between *Bullman* and the claimed subject matter, the rejection of claim 1 is insufficient because the Examiner has apparently compared the wrong subject matter to *Bullman*. The Examiner relies on *Bullman* for the element "wherein an asserted second mode is substituted for an asserted first signal." (emphasis added), Office Action mailed 11/30/2004, ¶ 3, page 3. The quoted claim elements are not recited in claim 1. Instead, claim 1 recites: wherein an asserted second signal is substituted for an asserted second signal" (emphasis added). The Examiner's cited "second mode" is distinguishable from the claimed "second signal." The Applicants might treat this as a simple typographical error, but the Examiner repeats the error by stating, "One skilled in the art would have been motivated to Bullman to "second mode is substituted for an asserted first signal." However, even if the Examiner had correctly cited claim 1, the cited portion of *Bullman* (col. 4, lines 30-41) does not disclose "an asserted second signal is substituted for an asserted first signal." See Office Action mailed 11/30/2004, ¶ 3, page 3.

Bullman discloses subject matter that is patentably distinguishable from the claimed subject matter of claims 1, 3-5, 21, and 23-25. The cited portion of *Bullman* discloses that upon detection of a V1.x node, an advanced terminal (i.e., a V2.x device) tags the system as a mixed mode topology and modifies the preamble of the native mode frame by prepending a valid V1.x Access ID (AID) to the native mode frame. Col. 4, lines 34-38. Modifying a preamble of the native mode frame is patentably distinguishable from claim 1's "an asserted second signal is substituted for an asserted first signal." Further, the Examiner has not established (and it is not clear

from *Bullman*) (1) whether the cited signal(s) in *Bullman* are "asserted;" (2) which is the asserted first signal; and (3) which signal is the asserted second signal.

The claimed subject matter is further distinguishable from the cited references. For example, neither *Bullman* nor any citation of the HPNA specification provided by the Examiner recites claim 1's elements, "wherein an asserted second signal is substituted for an asserted first signal, wherein the network state is the second mode if the asserted second signal is substituted for an asserted first signal, wherein a network state is the second mode if the second signal is asserted, wherein the network state is the third mode if the network state is not the second mode." Further, in support of the rejection of claim 1, the Examiner states,

"Bullman et al teaches a interoperable network device that for one V2.x device is adapted to recognize a presence of at least one V1.x device and to modify a frame format based on this recognition. In particular, upon detection of the presence of a V1.x node, and advanced terminal tags the system as a mixed mode topology and modifies the preamble of the native mode frame by prepending...a valid V1.x access ID to the native mode frame." Office Action mailed 11/30/2004, ¶ 3, page 3.

Even if the Examiner's statements are taken as true, the Examiner has not provided a *prima facie* case by citing to portions of the HPNA specification and *Bullman* that recite each and every limitation of any claim. Regarding the HPNA specification, the Examiner has not cited to specific portions of the HPNA specification. Instead, the Examiner has taken parts of the Applicants' Specification and incorrectly used it as prior art in rejecting the claims. Therefore, the Examiner has not established a *prima facie* case that any claim is obvious over the HPNA specification in view of *Bullman*. In addition, rather than make a clear and particular showing, the Examiner makes broad and conclusory statements, which are not objective evidence. For at least the foregoing reasons, claims 1, 3-5, 21 or 23-25 are allowable over the HPNA specification in view of *Bullman*.

Regarding claim 21, neither *Bullman* nor the HPNA specification 2.0 disclose "method for supporting three network states under HPNA 2.0 using two network states." Neither reference, alone or in combination, discloses "substituting an asserted

second signal for an asserted first signal; setting a network state to the second mode if the second signal is asserted; setting the network state to the third mode if the network state is not the second mode; and setting the network state to the second mode if the asserted second signal is substituted for the asserted first signal. When applying claim 21 to the HPNA 2.0 specification and *Bullman*, the Examiner appears to have glossed over many of claim 21's elements. Further, rather than citing from the HPNA 2.0 specification, the Examiner cites from the Applicant's Specification. Still further, the Examiner has not demonstrated how the above elements from claim 21 are found in the cited references. In summary, neither reference, alone or in combination, recites every element of claim 21. Further, the Examiner has not established a *prima facie* case for obviousness by pointing out where each element of claim 21 is found in either reference. Therefore, claim 21 is allowable over the cited references in light of 35 U.S.C. § 103. Further, claims 23-25 depend directly or indirectly from claim 21 and therefore recite every limitation of claim 21. Likewise, claims 23-25 are allowable over the cited references, taken alone or in combination.

Ordinary Skill and Relevant Art

In resolving the level of ordinary skill of the pertinent art as required by the third step in *Graham*, the Examiner must step backward in time and into the shoes worn by a person of ordinary skill when the invention was unknown and just before it was made. The hypothetical person skilled in the art can be described as one who thinks along lines of conventional wisdom in the art and neither one who undertakes to innovate nor one who has the benefit of hindsight. Thus, neither an examiner, nor a judge, nor a genius in the art at hand, nor even the inventor is such a person skilled in the art.

In order to establish a *prima facie* case of obviousness, it is necessary for the Examiner to present evidence, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge that one having ordinary skill in the art would have been led to modify or combine the relevant teachings of the applied references in the proposed manner to arrive at the claimed invention. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1301 (Bd.

Pat. App. & Int. 1993); *Ashland Oil, Inc. v. Delta Resins and Refractories, Inc.*, 776 F.2d 281 (Fed. Cir. 1985). The motivation or suggestion to modify or combine references must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 47 U.S.P.Q. 2d 1453, 1458 (Fed. Cir. 1998). The showings must be clear and particular. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teachings of multiple references, standing alone, are not evidence. *Id.*

The legal conclusion of obviousness must have a correct factual basis. *See Graham v. John Deere & Co.*, 383 U.S. 1 (1966); *In re Rouffet*, 47 USPQ2d 1453, 1455 (Fed. Cir. 1998). Where the legal conclusion is not supported by facts, it cannot stand. *Id.* A rejection based on § 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The patentability of an invention is not to be viewed with hindsight or "viewed after the event." *Goodyear Company v. Ray O Vac Company*, 321 U.S. 275, 279 (1944). The proper inquiry is whether modifying or bringing them together was obvious and not, whether one of ordinary skill, having the invention before him, would find it obvious through hindsight to construct the invention. Accordingly, an Examiner cannot establish obviousness by locating references which describe various aspects of the patent Applicant's invention without also providing evidence of the motivating force which would compel one skilled in the art to do what the patent applicant has done.

There is no motivation to combine the HPNA specification and *Bullman*. The Examiner states as motivation:

"One skilled in the art would have been motivated to Bullman to 'second mode is substituted for an asserted first signal' to be adaptive to the operating rate of the network device. Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Bullman et al into the teaching of the HPNA 2.0 specification to read on the claim invention." *See Office Action* mailed 11/30/2004, ¶ 3, page 3.

The motivation to combine is insufficient. First, rather than citing from the HPNA specification, the Examiner improperly cites to the Applicants' Specification. However, even if the Examiner had cited to the HPNA specification, there is no motivation to combine the HPNA specification and *Bullman*. The reason given by the Examiner for combining the two references is based on the Examiner's subjective opinions and the motivation is unsupported by any facts or objective evidence.

The Examiner's rejection of claims 1, 3-5, 21, and 23-25 does not rest on a factual basis. Instead, the Examiner has attempted hindsight reconstruction of the invention by picking elements from the Applicants' Specification (cited as the NPNA 2.0 specification) and *Bullman*. The Examiner has improperly cited to and mischaracterized elements in the Applicants' as "admitted prior art." Further, the obviousness rejections of claims 1, 3-5, 21, and 23-25 based on the HPNA specification in view of *Bullman* are improper because the rejections are not based on fact.

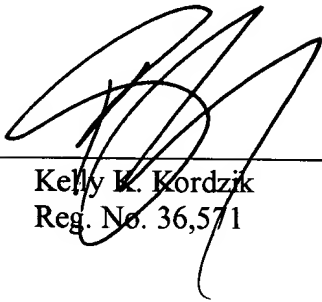
CONCLUSION

Applicants express appreciation for the allowance of claims 11-20 and 32-41. Applicants have amended claim 1 and 21 to more distinctly claim the subject matter of the present invention to overcome 35 U.S.C. § 112, ¶ 2 rejections. These amendments of claims 1 and 21 also place claims 2, 6-10, 22, 26-31 in allowable condition over rejections based on 35 U.S.C. § 112, ¶ 2. Applicants traverse obviousness rejections of claims 1, 3-5, 21, 23-25. Therefore, all remaining claims are in condition for allowance and Applicants respectfully request early allowance of such claims.

Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.
Attorney for Applicants

By: _____


Kelly K. Kordzik
Reg. No. 36,571

P.O. Box 50784
Dallas, Texas 75201
(512) 370-2851

Austin_1\273973\2
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